

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: ALLEN, et al.

Serial No.: 10/596561

Group Art Unit No.: 1625

Filed: 16-Jun-2006

Examiner: Rahmani, Niloofar

For: PYRAZOLO [3,4-B] PYRIDINE COMPOUNDS, AND THEIR USE AS  
PHOSPHODIESTERASE INHIBITORS

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

RESPONSE TO RESTRICTION REQUIREMENT

This paper is in response to the Restriction Requirement mailed 13 September 2006, having a shortened statutory period for reply of 1 month. Claims 1-6, 9 and 10 are pending in the application. Claims 1-6, 9 and 10 are subject to a restriction requirement and/or election requirement. Applicants desire to reply as follows.

Restriction to one of the following is required under 35 U.S.C. §121 and 372:

- Group I. Claims 73-123 and 128-135, drawn to compound of formula (I), wherein Ar being formula (x) and in sub-formula (x), A being C-R<sup>6A</sup>, B being C-R<sup>6B</sup>, D being C-R<sup>6D</sup>, E being C-R<sup>6E</sup>, F being C-R<sup>6F</sup>, classified in class 546, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.
- Group II. Claims 73-123 and 128-135, drawn to compound of formula (I), wherein Ar being formula (x) and in sub-formula (x), A being nitrogen or N<sup>1</sup>-O, B being C-R<sup>6B</sup>, D being C-R<sup>6D</sup>, E being C-R<sup>6E</sup>, F being C-R<sup>6F</sup>, classified in class 546, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.
- Group III. Claims 73-123 and 128-135, drawn to compound of formula (I), wherein Ar being formula (x) and in sub-formula (x), A being nitrogen or N<sup>1</sup>-O, B being C-R<sup>6B</sup>, D being C-R<sup>6D</sup>, E being C-R<sup>6E</sup>, F being C-R<sup>6F</sup>, classified in class 546, subclass various. If this group is elected, a

further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.

- Group IV. Claims 73-123 and 128-135, drawn to compound of formula (I), wherein **Ar** being formula (x) and in sub-formula (x), **A** being C-R<sup>6A</sup>, **B** being C-R<sup>6B</sup>, **D** being nitrogen or N<sup>+</sup>-O<sup>-</sup>, **E** being C-R<sup>6E</sup>, **F** being C-R<sup>6F</sup>, classified in class 546, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.
- Group V. Claims 73 -123 and 128-135, drawn to compound of formula (I), wherein **Ar** being formula (x) and in sub-formula (x), **A** being C-R<sup>6A</sup>, **B** being C-R<sup>6B</sup>, **D** being C-R<sup>6D</sup>, **E** being nitrogen or N<sup>+</sup>-O<sup>-</sup>, **F** being C-R<sup>6F</sup>, classified in class 546, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.
- Group VI.. Claims 73-1 23 and 128-1 35, drawn to compound of formula (I), wherein **Ar** being formula (x) and in sub-formula (x), **A** being C-R<sup>6A</sup>, **B** being C-R<sup>6B</sup>, **D** being C-R<sup>6D</sup>, **E** being C-R<sup>6E</sup>, **F** being nitrogen or N<sup>+</sup>-O<sup>-</sup>, classified in class 546, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.
- Group VII. Claims 73-123 and 128-135, drawn to compound of formula (I), wherein **Ar** being formula (x) and in sub-formula (x), **A** being nitrogen or N<sup>+</sup>-O<sup>-</sup>, **B** being nitrogen or N<sup>+</sup>-O<sup>-</sup>, **D** being C-R<sup>6D</sup>, **E** being C-R<sup>6E</sup>, **F** being C-R<sup>6F</sup>, classified in class 544, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.
- Group VIII. Claims 73-123 and 128-135, drawn to compound of formula (I), wherein **Ar** being formula (x) and in sub-formula (x), **A** being nitrogen or N<sup>+</sup>-O<sup>-</sup>, **B** being C-R<sup>6B</sup>, **D** being nitrogen or N<sup>+</sup>-O<sup>-</sup>, **E** being C-R<sup>6E</sup>, **F** being C-R<sup>6F</sup>, classified in class 544, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.
- Group IX. Claims 73-123 and 128-135, drawn to compound of formula (I), wherein **Ar** being formula (x) and in sub-formula (x), **A** being nitrogen or N<sup>+</sup>-O<sup>-</sup>, **B** being C-R<sup>6B</sup>, **D** being C-R<sup>6D</sup>, **E** being nitrogen or N<sup>+</sup>-O<sup>-</sup>, **F** being C-R<sup>6F</sup>, classified in class 544, subclass various. If this group is

elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.

- Group X. Claims 73-123 and 128-135, drawn to compound of formula (I), wherein Ar being formula (x) and in sub-formula (x), A being nitrogen or N<sup>-</sup>-O<sup>-</sup>, B being C-R<sup>6A</sup>, D being C-R<sup>6D</sup>, E being C-R<sup>6E</sup>, F being nitrogen or N<sup>-</sup>-O<sup>-</sup>, classified in class 544, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.
- Group XI. Claims 73-123 and 128-135, drawn to compound of formula (I), wherein Ar being formula (x) and in sub-formula (x), A being C-R<sup>6A</sup>, B being nitrogen or N<sup>-</sup>-O<sup>-</sup>, D being nitrogen or N<sup>-</sup>-O<sup>-</sup>, E being C-R<sup>6E</sup>, F being C-R<sup>6F</sup>, classified in class 544, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.
- Group XII. Claims 73-123 and 128-135, drawn to compound of formula (I), wherein Ar being formula (x) and in sub-formula (x), A being C-R<sup>6A</sup>, B being nitrogen or N<sup>-</sup>-O<sup>-</sup>, D being C-R<sup>6D</sup>, E being nitrogen or N<sup>-</sup>-O<sup>-</sup>, F being C-R<sup>6F</sup>, classified in class 544, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.
- Group XIII. Claims 73-123 and 128-135, drawn to compound of formula (I), wherein Ar being formula (x) and in sub-formula (x), A being C-R<sup>6A</sup>, B being nitrogen or N<sup>-</sup>-O<sup>-</sup>, D being C-R<sup>6D</sup>, E being C-R<sup>6E</sup>, F being nitrogen or N<sup>-</sup>-O<sup>-</sup>, classified in class 544, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.
- Group XIV. Claims 73-123 and 128-135, drawn to compound of formula (I), wherein Ar being formula (x) and in sub-formula (x), A being C-R<sup>6A</sup>, B being C-R<sup>6B</sup>, D being nitrogen or N<sup>-</sup>-O<sup>-</sup>, E being nitrogen or N<sup>-</sup>-O<sup>-</sup>, F being C-R<sup>6F</sup>, classified in class 544, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.
- Group XV. Claims 73-123 and 128-135, drawn to compound of formula (I), wherein Ar being formula (x) and in sub-formula (x), A being C-R<sup>6A</sup>, B being C-R<sup>6B</sup>, D being nitrogen or N<sup>-</sup>-O<sup>-</sup>, E being C-R<sup>6E</sup>, F being nitrogen or N<sup>-</sup>-O<sup>-</sup>, classified in class 544, subclass various. If this

Serial No.: 10/596,561  
Group Art Unit No.: 1625

group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.

- Group XVI. Claims 73-123 and 128-135, drawn to compound of formula (I), wherein **Ar** being formula (x) and in sub-formula (x), **A** being C-R<sup>6A</sup>, **B** being C-R<sup>6B</sup>, **D** being C-R<sup>6D</sup>, **E** being nitrogen or N<sup>+</sup>-O<sup>-</sup>, **F** being nitrogen or N<sup>-</sup>-O<sup>-</sup>, classified in class 544, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.
- Group XVII. Claims 73-123 and 128-135, drawn to compound of formula (I), wherein **Ar** being formula (x) and in sub-formula (z), **G** being O, **J** being C-R<sup>6J</sup>, or C-[connection point to formula (I)], **L** being C-R<sup>6L</sup>, or C-[connection point to formula (I)], **M** being C-R<sup>6M</sup>, or C-[connection point to formula (I)], **Q** being C-R<sup>6Q</sup>, or C-[connection point to formula (I)], classified in class 546, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.
- Group XVIII. Claims 73-123 and 128-135, drawn to compound of formula (I), wherein **Ar** being formula (x) and in sub-formula (z), **G** being S, **J** being C-R<sup>6J</sup>, or C-[connection point to formula (I)], **L** being C-R<sup>6L</sup>, or C-[connection point to formula (I)], **M** being C-R<sup>6M</sup>, or C-[connection point to formula (I)], **Q** being C-R<sup>6Q</sup>, or C-[connection point to formula (I)], classified in class 546, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.
- Group XIX. Claims 73-123 and 128-135, drawn to compound of formula (I), wherein **Ar** being formula (x) and in sub-formula (z), **G** being N, **J** being C-R<sup>6J</sup>, or C-[connection point to formula (I)], **L** being C-R<sup>6L</sup>, or C-[connection point to formula (I)], **M** being C-R<sup>6M</sup>, or C-[connection point to formula (I)], **Q** being C-R<sup>6Q</sup>, or C-[connection point to formula (I)], classified in class 546, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.
- Group XX. Claims 73-123 and 128-135, drawn to compound of formula (I), wherein **Ar** being formula (x) and in sub-formula (z), **G** being O, **J** being C-R<sup>6J</sup>, or C-[connection point to formula (I)], **L** being C-R<sup>6L</sup>, or C-[connection point to formula (I)], **M** being C-R<sup>6M</sup>, or C-[connection point to formula (I)], **Q** being C-R<sup>6Q</sup>, or C-[connection point to formula (I)], classified in class 546, subclass various. If this group is

elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.

- Group XXI. (Incorrectly identified as XVII) Claims 73-123 and 128-135, drawn to compound of formula (I), wherein **Ar** being formula (x) and in subformula (z), **G** being O, **J** being C-R<sup>6j</sup>, **L** being C-R<sup>6l</sup>, **M** being C-R<sup>6m</sup>, **Q** being C-R<sup>6q</sup>, classified in class 546, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.
- Group XXII. (Incorrectly identified as XVIII) Claims 73-123 and 128-135, drawn to compound of formula (I), wherein **Ar** being formula (x) and in subformula (z), **G** being O, **J** being C-R<sup>6j</sup>, **L** being C-R<sup>6l</sup>, **M** being C-R<sup>6m</sup>, **Q** being C-R<sup>6q</sup>, classified in class 546, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.[SAME AS GROUP XXI?]
- Group XXIII. (Incorrectly identified as XIX) Claims 73-123 and 128-135, drawn to compound of formula (I), wherein **Ar** being formula (x) and in subformula (z), **G** being O, **J** being C-R<sup>6j</sup>, **L** being C-R<sup>6l</sup>, **M** being C-R<sup>6m</sup>, **Q** being C-R<sup>6q</sup>, classified in class 546, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.[SAME AS GROUP XXI?]
- Group XXIV. (Incorrectly identified as XX) Claims 73-123 and 128-135, drawn to compound of formula (I), wherein **Ar** being formula (x) and in subformula (z), **G** being O, **J** being nitrogen, **L** being C-R<sup>6l</sup>, **M** being C-R<sup>6m</sup>, **Q** being C-R<sup>6q</sup>, classified in class 546, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.
- Group XXV. (Incorrectly identified as XXI) Claims 73-123 and 128-135, drawn to compound of formula (I), wherein **Ar** being formula (x) and in subformula (z), **G** being O, **J** being C-R<sup>6j</sup>, **L** being nitrogen, **M** being C-R<sup>6m</sup>, **Q** being C-R<sup>6q</sup>, classified in class 546, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.
- Group XXVI. (Incorrectly identified as XXII) Claims 73-123 and 128-135, drawn to compound of formula (I), wherein **Ar** being formula (x) and in subformula (z), **G** being O, **J** being C-R<sup>6j</sup>, **L** being C-R<sup>6l</sup>, **M** being nitrogen, **Q** being C-R<sup>6q</sup>, classified in class 546, subclass various. If

this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.

Group XXVII. (Incorrectly identified as XXIII) Claims 73-123 and 128-135, drawn to compound of formula (I), wherein **Ar** being formula (x) and in subformula (z), **G** being O, **J** being C-R<sup>6J</sup>, **L** being C-R<sup>6L</sup>, **M** being C-R<sup>6M</sup>, **Q** being nitrogen, classified in class 546, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.

Group XXVIII. (Incorrectly identified as XXIV) Claims 73-123 and 128-135, drawn to compound of formula (I), wherein **Ar** being formula (x) and in subformula (z), **G** being S, **J** being nitrogen, **L** being C-R<sup>6L</sup>, **M** being C-R<sup>6M</sup>, **Q** being C-R<sup>6Q</sup>, classified in class 546, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.

Group XXIX. (Incorrectly identified as XXV) Claims 73-123 and 128-135, drawn to compound of formula (I), wherein **Ar** being formula (x) and in subformula (z), **G** being S, **J** being C-R<sup>6J</sup>, **L** being nitrogen, **M** being C-R<sup>6M</sup>, **Q** being C-R<sup>6Q</sup>, classified in class 546, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.

Group XXX. (Incorrectly identified as XXVI) Claims 73-123 and 128-135, drawn to compound of formula (I), wherein **Ar** being formula (x) and in subformula (z), **G** being S, **J** being C-R<sup>6J</sup>, **L** being C-R<sup>6L</sup>, **M** being nitrogen, **Q** being C-R<sup>6Q</sup>, classified in class 546, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.

Group XXXI. (Incorrectly identified as XXVII) Claims 73-123 and 128-135, drawn to compound of formula (I), wherein **Ar** being formula (x) and in subformula (z), **G** being S, **J** being C-R<sup>6J</sup>, **L** being C-R<sup>6L</sup>, **M** being C-R<sup>6M</sup>, **Q** being nitrogen, classified in class 546, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.

Group XXXII. (Incorrectly identified as XXVIII) Claims 73-123 and 128-135, drawn to compound of formula (I), wherein **Ar** being formula (x) and in subformula (z), **G** being N, **J** being nitrogen, **L** being C-R<sup>6L</sup>, **M** being C-R<sup>6M</sup>, **Q** being C-R<sup>6Q</sup>, classified in class 546, subclass various. If this

Serial No.: 10/596,561  
Group Art Unit No.: 1625

group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.

Group XXXIII. (Incorrectly identified as XXIX) Claims 73-123 and 128-135, drawn to compound of formula (I), wherein **Ar** being formula (x) and in sub-formula (z), **G** being N, **J** being C-R<sup>6J</sup>, **L** being nitrogen, **M** being C-R<sup>6M</sup>, **Q** being C-R<sup>6Q</sup>, classified in class 546, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.

Group XXXIV. (Incorrectly identified as XXX) Claims 73-123 and 128-135, drawn to compound of formula (I), wherein **Ar** being formula (x) and in sub-formula (z), **G** being N, **J** being C-R<sup>6J</sup>, **L** being C-R<sup>6L</sup>, **M** being Nitrogen, **Q** being C-R<sup>6Q</sup>, classified in class 546, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.

Group XXXV. (Incorrectly identified as XXXI) Claims 73-123 and 128-135, drawn to compound of formula (I), wherein **Ar** being formula (x) and in sub-formula (z), **G** being N, **J** being C-R<sup>6J</sup>, **L** being C-R<sup>6L</sup>, **M** being C-R<sup>6M</sup>, **Q** being Nitrogen, classified in class 546, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.

Group XXXVI. (Incorrectly identified as XXXII) Claims 73-123 and 128-135, drawn to compound of formula (I), wherein **Ar** being formula (x) and in sub-formula (z), **G** being C, **J** being Nitrogen, **L** being C-R<sup>6L</sup>, **M** being C-R<sup>6M</sup>, **Q** being C-R<sup>6Q</sup>, classified in class 546, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.

Group XXXVII. (Incorrectly identified as XXXII) Claims 73-123 and 128-135, drawn to compound of formula (I), wherein **Ar** being formula (x) and in sub-formula (z), **G** being C, **J** being Nitrogen, **L** being C-R<sup>6L</sup>, **M** being C-R<sup>6M</sup>, **Q** being C-R<sup>6Q</sup>, classified in class 546, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.

Group XXXVIII. (Incorrectly identified as XXXIII) Claims 73-123 and 128-135, drawn to compound of formula (I), wherein **Ar** being formula (x) and in sub-formula (z), **G** being C, **J** being C-R<sup>6J</sup>, **L** Nitrogen, **M** being C-R<sup>6M</sup>, **Q** being C-R<sup>6Q</sup>, classified in class 546, subclass various. If this

Serial No.: 10/596,561  
Group Art Unit No.: 1625

group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.

Group XXXIX. (Incorrectly identified as XXXIV) Claims 73-123 and 128-135, drawn to compound of formula (I), wherein **Ar** being formula (x) and in sub-formula (z), **G** being C, **J** being C-R<sup>6j</sup>, **L** being C-R<sup>6l</sup>, **M** being Nitrogen, **Q** being C-R<sup>6q</sup>, classified in class 546, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.

Group XXXX. (Incorrectly identified as XXXV) Claims 73-123 and 128-135, drawn to compound of formula (I), wherein **Ar** being formula (x) and in sub-formula (z), **G** being C, **J** being C-R<sup>6j</sup>, **L** being C-R<sup>6l</sup>, **M** being C-R<sup>6m</sup>, **Q** being Nitrogen, classified in class 546, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.

Group XXXXI. (Incorrectly identified as XXXVI) Claims 73-123 and 128-135, drawn to compound of formula (I), wherein **Ar** being formula (x) and in sub-formula (z), wherein **G**, **J**, **L**, **M**, **Q**, being other than groups XVII-XXXV, classified in class 546, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.

Group XXXXII. (Incorrectly identified as XXXV) Claims 124-127, and 136, drawn to composition and method for treating an inflammatory disease using the compounds of formula (I), classified in class 514, subclass various. If this group is elected, a further election of a single disclosed species of compound is also required. Further restriction based on the species election may be required.